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INSECTICIDE RECOMMENDATIONS MANUAL



Ontario

**Ministry of the
Environment**

PESTICIDES CONTROL SERVICE

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Environment Ontario

MINISTRY OF THE ENVIRONMENT
PESTICIDES CONTROL SERVICE

INSECTICIDE RECOMMENDATIONS
M A N U A L

Toronto, Ontario.
December, 1972

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J. G. KURYS,
Editor.



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INTRODUCTION

The purpose of the insecticides recommendations is to inform the pest control operator of the basic principles that he needs to work safely with pesticides. Special effort has been made to simplify the recommendations and give him the practical information, rather than technical toxicological details, about a variety of pesticides.

These recommendations have been developed as training guidelines, primarily to assist the Ontario pest control operator with the basic decisions with which he is faced every day. They are designed to help the pest control operator in the selection of insecticides for the individual control of each pest. Concentrations of each insecticide for each insect have been taken from the manufacturers' recommendations and the Registration records of the Pest Control Products Act, Canada Department of Agriculture, Ottawa, Ontario, wherever possible.

In the ever-changing techniques and research for each insecticide chemical, the operator is reminded not to take these recommendations as the final word, but rather should obey and adhere strictly to the label instructions for each insecticide chemical. It is possible that the method of control and concentration for any of these insecticide chemicals may have been changed or restricted, while the recommendations are still in use. It is the intent of the Pesticides Control Branch to revise these recommendations as often as necessary and as soon as possible. However, the pest control operator is responsible for his act of operations

as outlined in the Pesticides Act, 1971, Section 3.

Suggestions with respect to these recommendations are welcomed and should be addressed to:

Ministry of the Environment,
Technical & Education Section,
Pesticides Control Branch,
1 St. Clair Ave. W.,
Toronto, Ontario.

Toronto, Ontario.
December 1972.

J. G. KURYS,
Editor.

INSECTICIDE RECOMMENDATIONS

A N T S

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	Baygon 1% chlordane 2-3% diazinon 1.0% Baytex 1%	Short residual life.
Dusts	chlordane 5%	Place dusts only in areas inaccessible to children and pets. Chlorinated hydrocarbons are especially hazardous to cats.
Baits	Kepone paste	Pavement, carpenter, Pharaoh's, little black, Western thief.
	Kepone pellets DDVP 1.9% Baygon 2%	Pavement, carpenter, Pharaoh's.
<u>OUTDOOR CONTROL</u>		
Sprays	chlordane 2% Sevin (carbaryl) 2% Baytex 1%	Only wettable powder or flowable formulations available - agitation is required. Concentrations given are for spot and foundation treatments only. For extensive spraying of turf, ornamentals or other vegetation, it may be necessary to reduce the concentration - refer to the label directions.

INSECTICIDE RECOMMENDATIONSA N T Scont'd

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>OUTDOOR CONTROL</u>		
Dusts	Chlordane 5% Sevin (carbaryl) 5-10% Baytex 1%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.
Granules	chlordane 10%	
Baits	Kepone paste Kepone pellets	Pharaoh's, little black, pavement. Carpenter, Pharaoh's, pavement.

INSECTICIDE RECOMMENDATIONSAMERICAN DOG TICKS

(Do not confuse with Brown Dog Ticks)

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>OUTDOOR CONTROL</u>		<u>Do not treat animals. Refer them to a veterinarian.</u>
Sprays	chlordane 2% Delnav 0.5% diazinon 1.0% lindane 0.5% malathion 1% Sevin 1%	Concentrations given are for spot and foundation treatments only. For extensive spraying of turf, ornamentals or other vegetation, it may be necessary to reduce the concentration - refer to the label directions.
Dusts	Sevin 5-10%	For use in crawl spaces under houses.

INSECTICIDE RECOMMENDATIONSAMERICAN ROACHES

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	Baygon 1% chlordane 2% diazinon 1.0% Baytex 1% dursban 0.5%	
Dusts	chlordane 5% diazinon 2%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.
Baits	Kepone paste Kepone pellets DDVP 1.9% Baygon 2.0%	
<u>OUTDOOR CONTROL</u>		
Sprays	chlordane Sevin (carbaryl) 2% Baygon 1% Baytex 1% dursban 0.5%	Concentrations given are for spot and foundations treatments only. For extensive spraying of turf, ornamentals or other vegetation, it may be necessary to reduce the concentration - refer to the label directions.

INSECTICIDE RECOMMENDATIONSAMERICAN ROACHEScont'd

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>OUTDOOR CONTROL</u>		
Dusts	chlordan 5% Sevin (carbaryl) 5-10%	Place dusts only in areas inaccessible to children and pets - the chlorinated hydrocarbons are especially hazardous to cats.
Baits	Kepone paste Kepone pellets	

INSECTICIDE RECOMMENDATIONSBEDBUGS

TYPE TREATMENT	INSECTICIDES	COMMENTS
Sprays	Korlan (ronnel) 1% malathion 1% lindane 0.1%	For use on or near beds or furniture and other areas where there is a possibility of residues coming into contact with humans. <u>Caution:</u> Never spray bedding - treat mattresses only at seams, folds, buttons or tears. Have mattresses, etc. dried and covered before use.
Sprays	diazinon 1.0% Korlan (ronnel) 1% malathion 2% chlordane 2% lindane 0.5%	<u>For use in areas away from beds, etc.</u> where there is no possibility that residues can come into contact with humans.
Dusts	silica gel	For treating baby cribs. <u>Caution:</u> <u>silica gel</u> may cause irritation to skin.

INSECTICIDE RECOMMENDATIONSB E E S

TYPE TREATMENT	INSECTICIDES	COMMENTS
Dusts: (Nest and Adjacent <u>Areas</u>)	Chlordane 5% Baytex 1% Sevin 5-10% silica gel	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats. <u>Caution:</u> silica gel may cause irritation to skin.
Sprays: (Nest only)	Baygon 1% chlordane 2% Sevin 1% diazinon 1%	

INSECTICIDE RECOMMENDATIONSBOOKLICE

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	chlordane 2% diazinon 1.0% lindane 0.5% malathion 1%	
Dusts	chlordane 5% silica gel	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats. <u>Caution:</u> silica gel may cause irritation to skin.

INSECTICIDE RECOMMENDATIONSBOXELDER BUGS

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	malathion 1% chlordan 2% diazinon 1%	
Dusts	chlordan 5%	Place dusts only in areas inaccessible to children and pets - the chlorinated hydrocarbons are especially hazardous to cats.
<u>OUTDOOR CONTROL</u>		
Sprays	chlordan 2% malathion 2-3% Sevin 1-2%	Concentrations given are for spot and foundation treatments only - for extensive spraying of trees, ornamentals or other vegetation, it may be necessary to reduce the concentration - refer to the label directions.

INSECTICIDE RECOMMENDATIONSBROWN-BANDED ROACHES

TYPE TREATMENT	INSECTICIDES	COMMENTS
Sprays	Baygon 1% chlordane 2% lindane 0.5% malathion 2% diazinon 0.5% Baytex 1.0% dursban 0.5%	
Dusts	chlordane 5% silica gel	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats. <u>Caution:</u> silica gel may cause irritation to skin.
Baits	Kepone paste Kepone pellets Baygon 2% DDVP 1.9%	

INSECTICIDE RECOMMENDATIONSBROWN DOG TICKS

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	Baygon 1% Delnav 0.5% diazinon 0.5% Baytex 1.0% chlordane 2% lindane 0.5%	<u>Do not treat animals. Refer them to a veterinarian.</u> Resistance limits use in some areas.
<u>OUTDOOR CONTROL</u>		
Sprays	Delnav 0.5% diazinon 1.0% malathion 2% Sevin (carbaryl) 2% chlordane 2%	Concentrations given are for spot and foundation treatments only. For extensive spraying of turf, ornamentals or other vegetation, it may be necessary to reduce the concentration - refer to the label directions.
Dusts	Sevin (carbaryl) 5% chlordane 5%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.

INSECTICIDE RECOMMENDATIONSCARPET BEETLES

TYPE TREATMENT	INSECTICIDES	COMMENTS
Sprays - <u>on Non-Fabric areas</u>	chlordane 2% lindane 0.5% malathion 2-3% diazinon 0.5-1% Ronnel 1%	
Sprays on Fabrics	lindane 0.1%	Very short residual life.
Dusts	chlordane 5% lindane 1% malathion 5%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.

INSECTICIDE RECOMMENDATIONSCENTIPEDES

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	chlordanes 2% malathion 1% diazinon 1% Baytex 1% Baygon 1%	
Dusts	chlordanes 5% Sevin 1.0%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.
<u>OUTDOOR CONTROL</u>		
Sprays	chlordanes 2%	Concentrations given are for spot and foundation treatments only. Do not spray turf, ornamentals, or other vegetation for centipede control.

INSECTICIDE RECOMMENDATIONSCLOTHES MOTHS

TYPE TREATMENT	INSECTICIDES	COMMENTS
Sprays on Non-Fabric Areas	chlordan 2% lindane 0.5%	
Sprays on Fabrics	lindane 0.1% chlordan 2%	Very short residual life. Clothes and bedding must be dry cleaned before being used again.

INSECTICIDE RECOMMENDATIONSCLOVERMITES

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	diazinon 1% malathion 2%	
<u>OUTDOOR CONTROL</u>		
Sprays	<u>For Active Stages*</u> diazinon 0.1-0.5% malathion 0.5-1% <u>For Egg Stage*</u> chlorobenzilate 0.03% Kelthane 0.03%	Lawns, trees, shrubs, exterior of structure. Avoid plant injury. Do not use oil solutions. Use only as directed on the label.

- * Improved residual control may be achieved by the use of a combination of an ovicide, such as chlorobenzilate at 0.03% or Kelthane at 0.03%, or with insecticides such as 1% diazinon or 1% malathion, which are primarily effective against active stages of the clovermites.

INSECTICIDE RECOMMENDATIONSCRICKETS, HOUSE

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	chlordan 2% diazinon 1.0%	
Dusts	chlordan 5%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.
<u>OUTDOOR CONTROL</u>		
Sprays	chlordan 2% malathion 1%	Concentrations given are for spot and foundation treatments only. For extensive spraying of turf, ornamentals or other vegetation, it may be necessary to reduce the concentration - refer to the label directions.
Dusts	Sevin 5-10% (Outdoors only)	

INSECTICIDE RECOMMENDATIONSEARWIGS

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	Baygon 1% diazinon 0.5-1% malathion 2-3% chlordane 2%	
Dusts	chlordane 5%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.
<u>OUTDOOR CONTROL</u>		
Sprays	diazinon 1.0% malathion 2% Sevin (carbaryl) 2% chlordane 2% Baygon 1%	Concentrations given are for spot and foundation treatments only. For extensive spraying of turf, ornamentals or other vegetation, it may be necessary to reduce the concentration - refer to the label directions.
Dusts	chlordane 5% Sevin (carbaryl) 10%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.

INSECTICIDE RECOMMENDATIONSFLEAS - CAT & DOG

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	Baytex 1.0% diazinon 1% Korlan (ronnel) 2% malathion 2% Baygon 1% lindane 0.5%	<u>Do not treat animals.</u> <u>Refer them to a veterinarian.</u>
Dusts	diazinon 2% malathion 5% silica gel	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats. <u>Silica gel</u> may cause irritation to skin.
<u>OUTDOOR CONTROL</u>		
Sprays	Delnav 0.5% diazinon 0.5% malathion 2% Sevin (carbaryl) 2%	Concentrations given are for spot and foundation treatments only. For extensive spraying of turf, ornamentals or other vegetation, it may be necessary to reduce the concentration. Refer to the label directions.
Dusts	diazinon 2% malathion 5% Sevin (carbaryl) 10%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.

INSECTICIDE RECOMMENDATIONSF L I E S

TYPE TREATMENT	INSECTICIDES	COMMENTS
Sprays:		
Adulticides	Cygon (dimethoate) 1% *diazinon 1% Baytex 1.0% *Korlan (ronnel) 1% *malathion 3-5% *Dibrom (naled) 1%	For outdoor use only - do not spray directly on vegetation. Do not treat animals or con- taminate their feed or water. Very short residual life when used in water-based sprays.
Larvicides	Cygon (dimethoate) 1.0% DDVP 0.2% malathion 1% Korlan (ronnel) 1%	
Baits	DDVP diazinon Dibrom (naled) Dipterex Korlan (ronnel) malathion	Mixed with sugar or sugar and water.

* Addition of sugar (1/2 pound per gallon of finished spray) increases residual life.

INSECTICIDE RECOMMENDATIONSGERMAN ROACHES

TYPE TREATMENT	INSECTICIDES	COMMENTS
Sprays	diazinon 1% Baytex 1.0% Korlan (ronnel) 2% Baygon 1% dursban 0.5% chlordane 2%	<u>Chlordane</u> - Resistance limits use in most areas.
Dusts	diazinon 2% silica gel	<u>Caution:</u> silica gel may cause irritation to skin.
Baits	Kepone paste Kepone pellets DDVP 1.9% Baygon 2%	

INSECTICIDE RECOMMENDATIONSGRAIN & CEREAL BEETLES

TYPE TREATMENT	INSECTICIDES	COMMENTS
Sprays	chlordane 2% diazinon 0.5% lindane 0.5% malathion 1% Baygon 1%	Avoid contamination of food and utensils. Cover treated surfaces with shelf paper before replacing food or utensils. <u>Baygon</u> : For saw-toothed grain beetle only.

INSECTICIDE RECOMMENDATIONSMILLIPEDES

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	chlordane 2% lindane 0.5% diazinon 1% Baytex 1% Baygon 1%	
Dusts	chlordane 5%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.
<u>OUTDOOR CONTROL</u>		
Sprays	chlordane 2% diazinon 1% lindane 0.5% Sevin 1-2%	Concentrations given are for spot and foundations treatments only.
Dusts	chlordane 5% Sevin 5-10%	

INSECTICIDE RECOMMENDATIONSORIENTAL ROACHES

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	Baytex 1% Baygon 1% chlordane 2% diazinon 1% dursban 0.5%	
Dusts	chlordane 5% silica gel	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats. Caution: silica gel may cause irritation to skin.
Baits	Kepone paste Kepone pellets Baygon 2% DDVP 1.9%	
<u>OUTDOOR CONTROL</u>		
Sprays	chlordane 1-2% Baytex 1% Baygon 1% dursban 0.5%	Concentrations given are for spot and foundation treatments only. For extensive spraying of turf, ornamentals or other vegetation, it may be necessary to reduce the concentration - refer to the label directions.

INSECTICIDE RECOMMENDATIONSORIENTAL ROACHES(cont'd)

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>OUTDOOR CONTROL</u> (cont'd) Dusts	 chlordan 5%	 Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.

INSECTICIDE RECOMMENDATIONSSILVERFISH

TYPE TREATMENT	INSECTICIDES	COMMENTS
Sprays	chlordane 2% diazinon 0.5-1% lindane 0.5% Baytex 1.0% malathion 2% dursban 0.5%	
Dusts	chlordane 5% diazinon 2% lindane 1% silica gel	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats. <u>Caution:</u> silica gel may cause irritation to skin.
Baits	Kepone pellets	

INSECTICIDE RECOMMENDATIONSSOWBUGS

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	chlordane 1-2% lindane 0.5% Baygon 1%	
<u>OUTDOOR CONTROL</u>		
Sprays	chlordane 1-2% lindane 0.5% Sevin 1-2%	Concentrations given are for spot and foundation treatments only. Do not spray turf, ornamentals, or other vegetation for sowbug control.
Dusts	chlordane 5% Sevin 10%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.

INSECTICIDE RECOMMENDATIONSSPIDERS

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	Baytex 1% Baygon 1% chlordane 2% diazinon 0.5-1%	
Dusts	chlordane 5%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.
<u>OUTDOOR CONTROL</u>		
Sprays	chlordane 2% diazinon 0.5-1% Baygon 1% Baytex 1%	Concentrations given are for spot and foundation treatments only. For extensive spraying of turf, ornamentals or other vegetation, it may be necessary to reduce the concentration - refer to the label directions.
Dusts	chlordane 5-10%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.

INSECTICIDE RECOMMENDATIONSSPRINGTAILS

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR CONTROL</u>		
Sprays	chlordane 2% diazinon 0.5%-1% lindane 0.5% malathion 1-2%	
<u>OUTDOOR CONTROL</u>		
Sprays	chlordane 1-2% lindane 0.5% malathion 1-2%	Concentrations given are for spot and foundation treatments only. For extensive spraying of turf, ornamentals or other vegetation, it may be necessary to reduce the concentration - refer to the label directions.
Dusts	chlordane 5%	

INSECTICIDE RECOMMENDATIONSWASPS

TYPE TREATMENT	INSECTICIDES	COMMENT
Sprays - (Nests and Adjacent Areas)	malathion 1% Baygon 1% chlordan 2% diazinon 1% Sevin 2%	
Dusts	chlordan 5% lindane 1% Sevin 5-10%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.

INSECTICIDE RECOMMENDATIONSWOOD ROACHES

TYPE TREATMENT	INSECTICIDES	COMMENTS
<u>INDOOR & OUTDOOR CONTROL</u>		
Sprays	Baytex 1% Baygon 1% chlordane 2% diazinon 1%	
Dusts	chlordane 5%	Place dusts only in areas inaccessible to children and pets. The chlorinated hydrocarbons are especially hazardous to cats.
Baits	Kepone paste Kepone pellets Baygon 2% DDVP 1.9%	

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1. National Pest Control Association Technical Releases.
2. Manufacturers' Recommendations from various Pesticides Formulations Companies.
3. Trade Memorandums, Pesticides Control Unit,
Plant Products Division,
Canada Department of Agriculture,
Ottawa, Ontario.

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